

144. (New) The apparatus defined in Claim 141 wherein the information indicates where truncation may occur in each bit plane.

145. (New) The apparatus defined in Claim 138 wherein the means for truncating coding units in the codestream operates based on significance.

C4
Cn^o

146. (New) The apparatus defined in Claim 136 wherein the target device comprises a low resolution, high pixel depth embedded target, and further wherein the means for decoding data in the codestream comprises means for decoding only higher level coefficients needed to achieve full pixel depth and low spatial resolution of the target device.

147. (New) The apparatus defined in Claim 136 wherein the target device comprises a high resolution, low pixel depth embedded target, and further wherein the means for decoding data in the codestream comprises means for decoding only higher level coefficients needed to achieve low pixel depth and high spatial resolution of the target device.

REMARKS

Applicants respectfully request reconsideration of the present U.S. Patent application as amended herein. Claims 68, 72-74 and 76-80 have been amended. No

claims have been canceled. Claims 94-147 have been added. Thus, claims 68-80 and 94-147 are pending.

New Claims

Claims 94-105 have been added. Support for the new claims can be found, for example, at pages 12 and 13 as well as pages 87-89. No new matter has been added.

Claim Rejections - 35 U.S.C. § 102(e)

Claims 68-80 were rejected as being anticipated by U.S. Patent No. 5,631,977 issued to Koshi, et al. (*Koshi*). For at least the reasons set forth below, Applicants submit that claims 68-80 are not anticipated by *Koshi*.

Claim 68 recites the following:

identifying a target device to receive data in the embedded codestream;
decoding each bit-plane to provide data to the target device by **truncating each bit-plane** in the embedded codestream for data necessary to support the target device.

Thus, Applicants claim truncating *bit-planes* as necessary. New claim 94 recites similar limitations.

In contrast, *Koshi* discloses truncating *data blocks* that are MxN blocks of pixels. See col. 5, lines 42-53. Bit-planes do not directly represent pixels in the way the blocks of digital pixels disclosed by *Koshi* do. Therefore, *Koshi* does not anticipate the invention as claimed in claims 68 and 94.

Claims 69-80 depend from claim 68. Claims 95-105 depend from claim 94. Because dependent claims include the limitations of the claims from which they depend, Applicants submit that claims 69-80 and 95-105 are not anticipated by *Koshi* for at least the reasons set forth above.

New Claims

Claims 94-147 have been added. Claims 95-105 are not anticipated by *Koshi* for at least the reasons set forth above. Independent claims 106, 107, 120, 121, 134 and 135 recite transformation using reversible wavelet filters and entropy encoding. *Koshi* does not disclose the encoding and transformation as claimed. Therefore, *Koshi* does not anticipate claims 106-147.

Conclusion

For at least the foregoing reasons, Applicants submit that the rejections have been overcome. Therefore, claims 68-80 and 94-147 are in condition for allowance and such action is earnestly solicited. The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the present application.

Please charge any shortages and credit any overcharges to our Deposit Account number 02-2666.

Respectfully submitted,
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MARKED VERSION OF THE AMENDED CLAIMS

68. (Amended) A method of using an embedded codestream comprising:
identifying a target device to receive data in the embedded codestream; and
decoding each bit-plane to provide data to the target device[, said step of
decoding comprising the step of] by truncating each bit-plane in the embedded
codestream for data necessary to support the target device.

72. (Amended) The method defined in Claim 68 wherein each bit-plane is
truncated based on one of a plurality of indications in each coding unit denoting where
truncation may occur[, said step of truncating] further comprises [comprising the step of]
selecting one of the indications based on the target device.

73. (Amended) The method defined in Claim 68 wherein [the step of]
truncating comprises truncating target resolution coefficients, coded separately in each
coding unit, from the embedded codestream.

74. (Amended) The method of Claim 68 wherein the target device comprises
a low resolution, high pixel depth embedded target such that [the step of] decoding
decodes as many higher level coefficients as needed to achieve full pixel depth and low
spatial resolution of the target device.

76. (Amended) The method defined in Claim 68 further comprising [the steps of]:

selecting coding units based on an amount of available buffering at the target device; and

truncating each coding unit with more data than available buffering.

77. (Amended) The method defined in Claim 68 wherein [the step of] truncating further comprises [the step of]:

determining a uniform amount to truncate each coding unit; and

truncating at least a portion of at least one importance level in each coding unit.

78. (Amended) The method defined in Claim 77 wherein [the step of] truncation is performed using information in a header of the codestream setting forth importance level information.

79. (Amended) The method defined in Claim 77 wherein [the step of] truncation is performed using information in a header of the codestream setting forth importance level information for each coding unit in the codestream.

80. (Amended) The method defined in Claim 77 [wherein the steps are performed] being performed after encode time.